REF. 4

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liquid soap ...from scratch

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you would think that once you become comfortable with making soap from scratch, it would be an easy segue to making liquid soap. *au contraire!* as covered in "**[bar] soap from scratch**", cp (cold process) soapmaking is easy, (which accounts for it's popularity), as compared to hp (hot process) soapmaking. it's not so much that hp is more difficult, just more involved. plus, the "hot process" or "cooking" makes the soap itself harder to work with. although liquid soap falls into two categories: "**bar-soap conversion**" and "**hot process**", the latter is the most involved and is necessary to produce a viscous, transparent, clear liquid soap.

i first went the easy route, reviewing recipes for a simple way of converting solid soap to liquid form. although the procedures varied, all the recipes basically came down to grating bar soap and diluting it with water. if this dilution is too thin, it's not effective a soap ...it doesn't lather [well]. if it's too thick, it wants to congeal into an "unusable" glob of slimy goo. although I came out with a usable product by following this recipe for "**bar-soap conversion**", this was not what i wanted.

click to enlarge

since the results of converting bar soap to a liquid proved unsatisfactory, i decided to tackle the hot process method for making a transparent liquid soap from scratch. the first step was to get [one of] catherine failor's books* entitled "***making natural liquid soap***". i did, and as i read, i realized that this was a bit more involved. but just as i overcame my initial apprehension of cp soapmaking, i was sure i could conquer this. after perusing the manual several times and sifting through all the facts and details, i proceeded with the method outlined below.

(**subsequently, i obtained ms. failor's other soapmaking publications entitled "**making cream soap**" and "**making transparent soap**". i've chronicled my exploits working with these fascinating and very-different soaps on my "**cream soap**" and "**transparent soap**" pages.*). and lastly, there's "**whipped soap**", which i've added to round out the soapmaking repertoire.

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this is the method i used for the hot process liquid soap: -- (*see "**soap recipes**" for my liquid soap recipes*)

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12 determining the concentration.

the concentration of the soap is not just a matter of choice. it's also determined by the oils you used. a concentration that's too low produces a soap that won't lather effectively, too high and the soap will congeal back into a paste.

soap from softer oils can only withstand so much concentration before it starts to congeal; sometimes as little as 20%. soap from all hard oils (e.g. coconut) can take a concentration of up to 40%. soap made from a mixture of hard and soft oils takes a concentration from 25% to 35%.

among other things, borax is an emulsifier and adding it to your soap will allow the soap to sustain a [higher] concentration where it would otherwise start to congeal. i'm going for a concentration of 30%.

soap concentration	water per lb. of paste
15 percent	48 ounces
20 percent	32 ounces
25 percent	22 ounces
30 percent	16 ounces
35 percent	12 ounces
40 percent	9 ounces

use the table to the left or calculate for yourself; the formula for determining dilution is simple. find out the percentage of actual soap in your paste (divide weight of (lye and oils) by the weight of the paste. this will be around 64% - 66%. now multiply the weight of the paste by that percentage. this is the weight of the actual soap in the paste. now, divide that amount by the desired concentration, (say 30%). this is the projected weight of your dilution. finally, subtract the weight of the paste from this projected dilution weight. the result is the amount of water you need to add to the paste to achieve the selected concentration.

for 100 gm pf paste with a 65% of actual soap, diluted for a 30% concentration, the numbers are as follows: (100 times .65 = 65; divided by .30 = 216.6; minus 100 = 116.6 gm water needed).